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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/406,087	09/24/1999	RYOTA AKIYAMA	1341.1030/JD	1217

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WASHINGTON, DC 20005

EXAMINER
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BROWN, CHRISTOPHER J

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/406,087

Applicant(s)

AKIYAMA ET AL.

Examiner

Christopher J. Brown

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 27-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/24/1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. As per the 112 rejections of claims 27, 28 and 33, the applicant has overcome the rejections.

Applicant's arguments with respect to claims 27-43 have been considered but are moot in view of the new ground(s) of rejection.

### ***Drawings***

2. The drawings are objected to because Figures 2A and 3A both contain the label "Hush Unit". The examiner believes this is supposed to be "Hash Unit" Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet

submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 27, 32, and 37-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitaori US 5,915,024 in view of Olarig US 6,009,524**

As per claims 27, 32, and 37-43 Kitaori teaches a first authenticator creating unit (transmitting terminal) for dividing the information into a plurality of data (divided document data) (Col 7 lines 61-66). Kitaori discloses that each has a prespecified length (delimiter character), (Col 7 lines 24-27). Kitaori discloses that the authenticators are created by applying a one-way function (hash, signature) to each of the divided data, (Col 8 lines 5-22).

Kitaori teaches linking the authenticator to the divided data (Col 8 lines 32-38). Kitaori discloses a certifying unit that recalculates the authenticator and checking to see that the recalculated authenticator data matches the send authenticator data, (Col 10 lines 1-40).

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Kitaori does not disclose using a different key and algorithm to create a one-way hash on each of the divided data.

Olarig teaches using two different signatures with different keys on data, (Col 4 lines 4-15). Olarig teaches verification of the signatures at the recipient, (Col 4 lines 15-20). It would be obvious to one skilled in the art to modify the signing system and message of Kitarori with the multiple algorithm and keys of Olarig to enhance the security of the message.

**Claims 28, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitaori US 5,915,024 in view of Olarig US 6,009,524 in view of Herbert US 6,023,509**

As per claims 28, and 33, Kitaori teaches a first authenticator creating unit (transmitting terminal) for dividing the information into a plurality of data (divided document data) (Col 7 lines 61-66). Kitaori discloses that each has a prespecified length (delimiter character), (Col 7 lines 24-27). Kitaori discloses that the authenticators are created by applying a one-way function (hash, signature) to each of the divided data, (Col 8 lines 5-22).

Kitaori teaches linking the authenticator to the divided data (Col 8 lines 32-38). Kitaori discloses a certifying unit that recalculates the authenticator and checking to see that the recalculated authenticator data matches the send authenticator data, (Col 10 lines 1-40).

Kitaori does not disclose using a different key and algorithm to create a one-way hash on each of the divided data.

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Olarig teaches using two different signatures with different keys on data, (Col 4 lines 4-15). Olarig teaches verification of the signatures at the recipient, (Col 4 lines 15-20). It would be obvious to one skilled in the art to modify the signing system and message of Kitarori with the multiple algorithm and keys of Olarig to enhance the security of the message.

Neither Kitarori or Olarig teach creating a signature by hashing both a first result and a second data division.

Herbert teaches a method that involves creation of a digital signature through a first hash in combination with a second data division, to create an authenticator, (Col 3 lines 15-24).

It would have been obvious to one of ordinary skill in the art to use the previous system of Kitarori-Olarig with the digital signature of Herbert, because it provides advantageous purpose binding (Col 3 lines 33-36).

**Claims 29, 31, 34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitaori US 5,915,024 in view of Olarig US 6,009,524 in view of Dolan US 5,604,801**

As per claims 29, 31, 34 and 36, the previous Kitaori-Olarig combination does not disclose truncation. Dolan discloses generating a digital signature made up of an encrypted hash of the message, (Col 6 lines 1-12). The digital signature is made of the

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original message, and the authenticators, thus the authenticators are truncated to the information.

It would be obvious to modify the Kitaori-Olarig combination with Dolan's digital signature so the receiver will be able to authenticate the sender, thus making the transmission more secure.

As per claims 3, and 8, Shear teaches using a first and second key different from each other to create authenticators, (Col 16 lines 30-36).

**Claims 30 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitaori US 5,915,024 in view of Olarig US 6,009,524 in view of Bellare US 5,757,913**

As per claims 30 and 35, the previous Kitaori-Olarig combination does not disclose parallel processing.

Bellare discloses parallel processing, (Col 1 lines 60-65).

It would have been obvious to one of ordinary skill in the art to modify the Kitaori-Olarig combination with Bellare's parallel processing to improve speed and efficiency.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,553,145 teaches sending data signed by two different parties using different keys. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher J. Brown whose telephone number is (571)272-3833. The examiner can normally be reached on 8:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (571)272-3838. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher J. Brown

11/18/05



GREGORY MORSE  
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